# Working Together To Achieve Clean Water:

# A PROGRESS REPORT

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Washington is a state blessed with water. Even though it seems like water is everywhere, from the lush rainfall of the west coast to the tremendous drainage systems of the Columbia Plateau, our water is in demand by everyone, and this demand has caused a water crisis for the state. The crisis is about quality and quantity. This report explains what people in Washington have been doing to solve our water quality problems—problems that at times seem desperate. Despite the challenges, there are reasons to be hopeful and positive.

The west side of the state has abundant rainfall, making it green and lush.

The east side of the state is arid, but is crossed by a network of large rivers, whose waters have transformed the desert into prime agricultural land.

We tend to take these wonders of nature for granted—because the rain always comes, because our rivers are so big, it's easy to think that there will always be enough clean water. But things have been changing, and it's mostly because there are so many of us.

A 1998 report by the Department of Natural Resources quantified the kinds of impacts we are having on the water in our state. "The sheer number of people in the state, and the activities we undertake, contribute to the pollution of fresh

Western Washington

Eastern Washington

water. Significant sources of pollution include:

- 5.2 million vehicles on 80,000 miles of public roads;
- more than 36,000 farms on 15.7 million acres of land;
- 275 municipalities with existing residential, commercial and industrial sources;
- and about 40,000 additional houses built each year." [1]

As Washington's population continues to increase, these potential sources of water pollution will increase as well. One of the things Washington's citizens have said they value most about living here is our clean water, which provides fish habitat, recreational opportunities, water for crops, and water to drink.[2] Yet, as the state's population continues to grow (see figure 1), it is becoming more and more difficult to protect the water we value so highly. In spite of our efforts, Washington has a significant number of water bodies polluted by an array of pollutants.

Washington citizens have been working for years to protect our clean waters and to clean up polluted ones. The work has yielded significant successes. Pollution from industrial sources and from municipal wastewater treatment plants has been significantly reduced. The water quality of many watersheds has improved through the development and implementation of local watershed plans.

However, what we're now finding is that pollution generated by the

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1 Washington state Department of Natural Resources, Our Changing Nature
2 University of Idaho, USDA Cooperative State Research, Education and Extension Service

everyday activities of all of us—from spraying chemicals in our yards to letting car washing water run down storm drains—is having a devastating effect on the quality of our water. To continue protecting and improving water quality, we must work even faster and more effectively than we have in the past to keep up with our growing population.

In fact, the U.S. Environmental Protection Agency (EPA) was sued in 1996 because Washington's polluted waters were not being cleaned up fast enough. As a result of that lawsuit, the EPA and the Department of Ecology (Ecology) entered into an agreement that requires Ecology to produce plans to clean up the water on a very short schedule. This report describes the progress Ecology has made in producing those plans, the lessons we've learned, and the successes we've achieved by collaborating with groups and individuals all across the state to clean up Washington's waters.

Population Trends in Washington State 1952- 2002

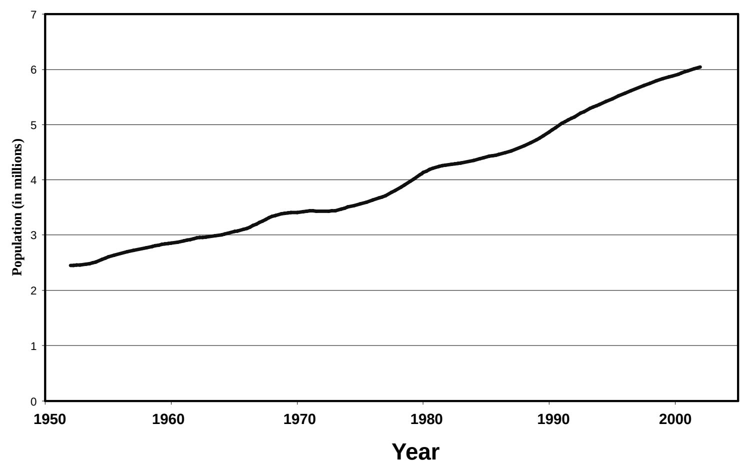
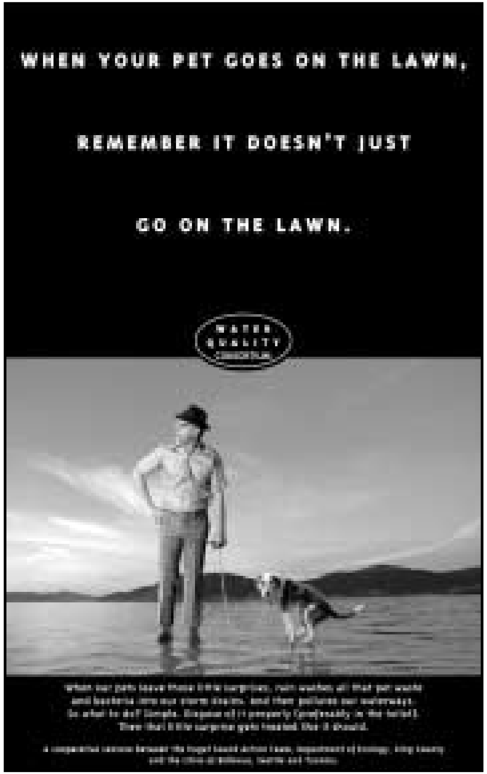



Figure 1

Population trends statistics from Office of Financial Management 2003




*Water Quality Education Materials: Nonpoint Source Pollution Tools.*

The major cause of water pollution in Washington is the sheer number of people who live here. People live everywhere—in cities, towns, and out in the country and forests of Washington. People work everywhere—in the woods, on farms, in factories, schools, and offices. People go everywhere for recreation. And almost everything that each one of us does when we're at home, at work, or at play, has the potential to cause pollution.

Water pollution can be divided into two categories, point sources and nonpoint sources. Point sources are those that are discharged from specific sources, such as industrial plants or municipal wastewater treatment plants. These pollution sources are relatively easy to identify and control because we can go to the end of the pipe and measure what's coming out. Point sources are regulated by permits, which place limits on the types and amounts of pollutants that may be discharged into the water. This permit system, which was created by the federal Clean Water Act, has been very successful in limiting the pollutants discharged into our water from point sources.

Nonpoint sources of pollution are much more difficult to identify and control. They are generated by a wide variety of land uses and activities, many of which do not seem to have any connection to water pollution.

WHY DO WE HAVE A WATER POLLUTION PROBLEM IN WASHINGTON?

Many different land uses produce the same kinds of pollution. For instance, excess sediments may come from farming, cutting trees, construction, or clearing streambanks of vegetation. A single watershed may be polluted by all of these sources or only some of them. One of the most difficult things about nonpoint pollution is the difficulty in correctly identifying the source. For this reason, the science involved in trying to pinpoint sources is complicated.

Did you walk your dog and neglect to pick up the waste and dispose of it properly? Rain will eventually wash the waste into a storm drain or directly into a stream, where it will contribute to bacterial pollution. One dog may not make much difference, but think of all the dogs and cats living in an urban area. Their waste can add up to a significant water quality problem.

Did you wash your car and let the water run into a storm drain? That water is contaminated with gas, oil, and other road grime, much of which is toxic. Also, most detergents contain phosphorus which can cause algae blooms. One person washing one car seems insignificant until you consider the cumulative effect of thousands of people washing thousands of cars.

Did you clear all the brush and trees from a stream bank on your property? That vegetated area could have absorbed and filtered any polluted runoff from accidental over application of weed killers or fertilizers used on your lawn before they reached the stream. It provided habitat for birds, mammals, amphibians, and insects, and gave shade to the stream, helping to maintain the low water temperatures fish need to survive. It may look tidy now, but a denuded stream bank inevitably contributes pollution to a stream.

According to the 1996 Report on Water Quality in Washington State [3], only 22 percent of the problems in streams that don't meet water quality standards can be traced to point sources. Most of the polluted streams are being harmed by nonpoint sources.

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3 Department of Ecology Publication # WQ-96-04

There are two legal reasons why we need to clean up Washington's water.

The federal Clean Water Act, adopted in 1972, requires that all states restore their waters to be "fishable and swimmable." To achieve this goal, the state of Washington has established water quality standards designed to protect the beneficial uses of our water bodies. These beneficial uses include drinking water, recreation, and habitat for fish and other aquatic life.

According to its agreement with EPA, the Department of Ecology is on a 15-year schedule to produce cleanup plans for the approximately 700 polluted water bodies identified on the 1996 list of impaired water bodies ("the 303(d) list").

But there's an even more important reason: Washington's citizens have clearly said they would rather have clean water than dirty water. It's as simple as that.

Washington's citizens have clearly said they would rather have clean water than dirty water.

## Step 1: List of polluted waters

The Clean Water Act established a process to identify and clean up polluted waters. Every two years, states are required to prepare a list of water bodies that do not meet water quality standards. This list is called the 303(d) list, because the process is described in Section 303(d) of the Clean Water Act.

To develop the list, the Department of Ecology compiles its own water quality data, and invites other groups to submit water quality data they have collected. Groups that have submitted data in the past include tribes, state and federal agencies, local governments, industries, and citizen monitoring groups. All data submitted are reviewed to ensure that they were collected using appropriate scientific methods before they are used to develop the 303(d) list. Once the list is put together, the public has a chance to review it during a public comment period that includes a series of public meetings. The final list is formally submitted to the EPA, which has the authority to approve or disapprove it.

The table on page 8 is an example of what a 303(d) list looks like. The listings are taken from the 1998 303(d) list.

The list can be found on the web at: www.ecy.wa.gov/programs/wq/303d/1998/.

The Clean Water Act requires that a water cleanup plan be developed for each of the water bodies on the 303(d) list. The technical name for a water cleanup plan is a Total Maximum Daily Load, or TMDL. A Total Maximum Daily Load identifies how much pollution needs to be reduced or eliminated to achieve clean water. A water body stays on the list until a TMDL has been developed for it, its pollution problem is addressed through some other pollution control process, or it meets water quality standards. The state monitors the effectiveness of TMDLs and other pollution controls, and if it finds that the water is not meeting standards, that water body goes back on the 303(d) list and more stringent pollution controls are required.

In 1996, the EPA was sued by a consortium of environmental groups because it was not requiring Ecology to produce TMDLs more quickly. As part of the settlement agreement for that case, EPA and Ecology developed a memorandum of agreement (MOA) stipulating that water cleanup plans for all of the water bodies on the 1996 303(d) list would be completed by 2013. The 1996 list identified 1566 separate pollutants impairing 666 water bodies in the state. (Many water bodies are affected by more than one pollutant.)

## 303(d) list-

Section 303(d) of the Clean Water Act.

| WRIA | Waterbody Name | Parameter |
|---|---|---|
| 1 | Anderson Creek | Fine Sediment |
| 1 | Anderson Creek | Temperature |
| 1 | Bellingham Bay | Acenaphthene |
| 7 | French Creek | Dissolved Oxygen |
| 7 | French Creek | Fecal Coliform |
| 9 | Eliott Bay | Arsenic |
| 15 | Private Creek | pH |
| 15 | Purdy Creek | Fecal Coliform |
| 28 | Fifth Plain Creek | Fecal Coliform |
| 35 | Snake River | Temperature |
| 37 | Wide Hollow Creek | DDT |
| 52 | Sanpoil River | Dissolved Oxygen |

## Step 2: TMDL or Water Cleanup Plan

All TMDLs have five main components:

1 An identification of the type, amount, and sources of water pollution in a particular water body or segment;
2 A determination of how much the pollution needs to be reduced or eliminated to achieve clean water;
3 An allocation showing how much pollution each source will be allowed to discharge;
4 A strategy to meet these allocations; and
5 A monitoring plan to make sure the water is getting cleaner as the TMDL is implemented.

In general, the TMDL identifies the problem and its sources, and local people choose the combination of possible solutions they think will be most effective in their situation.

For pollution coming from point sources, once the amount of pollutant a point source will be allowed to discharge has been determined, Ecology implements the TMDL by placing the necessary pollutant limits in pollution discharge permits.

For pollutants coming from nonpoint sources, once the source or sources have been identified, the TMDL implementation plan must evaluate potential methods to control the pollutants and suggest an array of methods that can be used. These methods are referred to as "best management practices." Usually there are many best management practices that could be used to address a pollution problem. For instance, to solve a bacterial contamination problem in a stream flowing through an agricultural area, best management practices might include fencing to keep animals out of streams, installation of stock watering facilities away from the stream, construction of a bridge if animals need to cross the stream to get from one pasture to another, manure management to prevent rainfall runoff from washing waste into the stream, and/or use of a riparian buffer (plants along the stream bank) to help prevent contaminated runoff from reaching the stream. Depending on the severity of the pollution problem, implementation of only one of these practices might solve it, or implementation of several practices might be needed.

This is where local knowledge and support are essential. Ecology has the technical know-how to do the scientific analysis required for a TMDL. Local people have the knowledge about their watersheds that helps to identify specific sources and the best management practices most likely to work. Local people care about their neighborhoods and their watersheds, and most are willing to do the work required to clean up their water. Because the solutions identified for a nonpoint pollution problem require action on the part of many people in a watershed, public participation in producing the TMDL is extremely important. Citizens in the watershed often have valuable knowledge to share about what works and what doesn't, and their input helps to tailor the TMDL to the specific environmental, economic, and social conditions in that watershed. By working together to produce the TMDL and identify solutions, citizens in the watershed come to own the TMDL and have a stake in its successful implementation. Without good science and the support of the local community, a TMDL will not be implemented, and the water will not be improved.

Local people have the knowledge about their watersheds that helps to identify specific sources and the best management practices most likely to work.

## Step 3: Evaluation

Each TMDL contains an effectiveness monitoring plan, designed to determine whether or not TMDL implementation actually improved water quality.

Ecology is presently working on designing an effectiveness monitoring program that will measure the effectiveness of various management practices as well as changes in overall water quality. This will allow us to more accurately predict which management practices will be most likely to be effective in solving nonpoint pollution problems.

If effectiveness monitoring determines that implementation of a TMDL has not resulted in improved water quality, TMDL partners may need to reassess their implementation efforts. They must determine if a broader array of the identified best management practices could be implemented or if an alternative might address remaining problems. If all of the practices identified have been implemented and the water still has not improved, the water body will be placed back on the 303(d) list, and a new TMDL will be required.

While this may seem like a laborious process, it works very well. We use scientifically valid data at every step. Communities provide input throughout the process and help shape the TMDL to work most effectively in their watersheds. After the TMDL is implemented we check to see whether water quality has improved. If it hasn't, we continue working together to figure out what else we can do. Even if water quality has improved, we continue working together to ensure the water meets water quality standards and stays that way. Keeping our water clean is a task that never ends and all of us have to do our part.

*Puget Creek restoration project. Photo courtesy of Puget Sound Action Team.*

The agreement between EPA and Ecology set out some interim goals for completing the 1566 TMDLs required by the 1996 303(d) list. By the end of year five, which ended on June 30, 2003, Ecology was to have completed 249 TMDLs. The number actually completed is 293. We were able to exceed the initial goal not only because of Ecology's efforts, but also because of the partnerships we've made with businesses, agencies, and tribes, who are taking on the responsibility of producing TMDLs for the watersheds they manage. The U.S. Forest Service and Simpson Timberlands were instrumental in helping to exceed the five-year goal.

However, in spite of our success so far, we have more challenges ahead. The goal for the second five years of the agreement is 552 TMDLs, and for the final five years is 765 TMDLs. We will meet these goals only by continuing to form partnerships and engaging more and more people in the production and implementation of TMDLs.

The challenge is to meet these goals without sacrificing either scientific validity or public process. We already know that simply meeting the TMDL schedule is not enough. To assure successful outcomes, we must take the time to work collaboratively with citizens and interested groups, and we must ensure that the scientific work is accurate and credible. If we skimp on these essential components of TMDL production, again the TMDL will not be implemented and water quality will not improve. Without implementation, a TMDL is just another dusty document.

| | Cumulative By Fiscal Year 2003 | Cumulative By Fiscal Year 2008 | Cumulative By Year 2013 |
|---|---|---|---|
| The number of TMDLs required through the settlement agreement | **249** | **801** | **1566** |
| The number of TMDLs submitted. | **293** | | |

Since individuals' actions in their own backyards are a significant contribution to water pollution problems, TMDLs must engage whole communities in order to achieve success. We have learned that this process requires a significant initial commitment of time and energy to ensure local involvement for the future. These first five years represent a major investment of resources, and have resulted in some significant successes:

- Formation of partnerships with businesses, agencies, and tribes that are interested in producing TMDLs for the watersheds they work in;
- Development of local work groups and advisory committees throughout the state, all helping to improve water quality in their communities;
- Citizens who are more aware of how their actions affect water quality; and
- A total of 293 completed TMDLs; and 14 Detailed Implementation Plans that specify how to get to cleaner water.

## What can individuals do to help protect water quality?

**Top things...**

1. Recycle (motor oil too!)
2. Carpool, bus, bike, walk
3. Pick up pet waste
4. Install low-flow devices in toilets, showers and faucets
5. Maintain your car
6. Avoid toxic products
7. Reduce fertilizer and pesticide use
8. Get involved in a water cleanup planning effort in your watershed.

**For more information check out Ecology's Water Quality Program website**
www.ecy.wa.gov/programs/wq/wqhome

We believe these initial investments will mean more effective on-the-ground actions and improved water quality for the long term. Local involvement in identifying and solving water quality problems is critical. When citizens are included and involved in the process, they are more willing to recognize the problem and contribute to its solution.

We have observed that most people care deeply about the health of their watersheds and value clean water. Ecology must draw upon the energy, expertise, and commitment of local communities to create innovative partnerships and solutions. Ecology's principal role is to support communities with our technical resources and our capacity to coordinate the effort of all participants in the process. To accomplish this, we have found that we need to give communities time to understand the TMDL process, to learn to trust us, and ultimately to decide to join the project.

In addition, we recognize that Ecology alone cannot perform sufficient follow-up to ensure water quality is maintained, or continues to improve over time. Communities need to take responsibility for the health of their watersheds. Local work groups and advisory committees can play this role over the long term. They can also work with citizens in their own communities to support actions that are working and to look for alternate strategies where needed.

Ecology must draw upon the energy, expertise, and commitment of local communities to create innovative partnerships and solutions.

Future TMDL projects will benefit from working with existing committees and with local entities that now have successful experience with the process. This should help streamline the projects, allowing communities to move more quickly to take action to improve water quality. Ecology and experienced local participants can share their experiences and implementation strategies with communities that are new to the TMDL process, for everyone's benefit.

Washington has completed the first part of a long-term strategy to clean up our polluted waters. We have a long way to go, but our state is succeeding because our communities, industries, and institutions are working together and learning how to do things better all the time. The work of cleaning up our waters and keeping them clean will never end, but with the support of all of Washington's citizens, our lakes, streams, and rivers have a bright future.

# Success Story: Fecal Coliform in the Lower Nooksack River



*Ecology inspector 'Mak' Kaufman taking a water quality sample downstream from a Whatcom County farm.*

**Problem:** A TMDL completed and approved in August, 2000 identified manure from dairy farms as the primary source of fecal coliform bacteria in the Nooksack River, followed by municipal wastewater treatment plants. The typical commercial dairy operation of 300 cows generates about as much waste as a city of 6,000 people. Baseline bacteria levels near the river's mouth at Portage Bay ranged from 200 to 800 units per 100 ml. with the legal limit being 14. The Lummi Indian Nation once ran a thriving commercial shellfish industry where this water flows. Because of the bacteria, the tribe had to close its shellfish beds in 1996, and the Department of Health classified them 'Restricted.' Prospects for reversing the downward trend in water quality seemed dim.

**Project Description:** But hard work has paid off and tests show the water is getting cleaner. Ecology's rigorous dairy inspection program, begun in 1998, now finds the problems and requires their solution through farm-specific plans written by the Conservation District and the Natural Resources Conservation Service (NRCS). These plans specify how waste on a particular farm will be managed to avoid any contamination of the river or its tributaries. Most Whatcom County farm plans require fencing cattle to keep them away from streams, and proper management and storage of manure.

Ecology's approach to working with dairy farmers is still enforcement-oriented but also has struck a good balance with education and outreach. Fair but firm enforcement, both formal and informal, has helped break down the image of the enforcing agency as an enemy and brought unprecedented change in the way dairy farmers operate their farms.

In accordance with the TMDL plan, Ecology tightened requirements in the discharge permits for four wastewater treatment plants, from Everson and Lynden down to Ferndale. Upgrades are underway. Fecal coliform in the Nooksack watershed has also been found to come from non-commercial dairy farms and from failing septic systems.

**Project Results:** Partnerships between Ecology, the Lummi Nation, the WA State Dept. of Health, the EPA, Portage Bay Shellfish Protection District, the Whatcom Conservation District, the county chapter of the State Dairy Federation, individual concerned citizens, and the county office of the NRCS have achieved impressive results. Water quality in Portage Bay continues to improve and shellfish beds are expected to be approved for harvest before the TMDLs June 2005 goal.

# Success Story: Fecal Coliform in the Lower Chehalis

*Grays Harbor Conservation District installed permanent power fencing along the west fork of the Satsop River, keeping cows in the pasture and out of the water and the riparian zone.*

**Problem:** Two previous TMDL studies in the upper Chehalis Basin identified sources of low dissolved oxygen, high fecal coliform, and high summer temperatures. Approximately 40 percent of the bacteria in the lower Chehalis River and Grays Harbor come from the upper watershed, above the town of Porter.

Shellfish growers in outer Grays Harbor have experienced repeated temporary closures due to both point and nonpoint sources of bacteria. Point sources include city sewage treatment plants; industries; and stormwater from Aberdeen, Hoquiam, Westport and Centralia.

**Project Description:** The Chehalis, a significant river in southwestern Washington, winds slowly for 123 miles through a relatively undeveloped watershed that covers more than 2,700 square miles and empties into Grays Harbor on the Pacific coast. Before 1998, most of the bacteria - more than 90 percent - came from nonpoint sources such as faulty home septic systems, livestock and dairy operations, agriculture and hobby farms, and wildlife.

The Grays Harbor Conservation District's focus within the lower Chehalis basin has been on keeping livestock away from streams where they can directly contribute fecal coliform and also cause erosion by trampling the streambanks. The district knew of livestock problems along the Satsop and Humptulips Rivers, tributaries to the Chehalis, and began fencing out cattle as early as 1994.

**Project Results:** New fencing along the Satsop River alone totals 11.5 miles. Bacteria levels there have dropped 75 percent below what the TMDL calls for. The reduction can only be attributed to lots of hard work by the Conservation District, county, Washington Department of Natural Resources, state and federal Fish and Wildlife agencies, Washington Conservation Commission and individual landowners. As of October 2002, in the Satsop and Humptulips basins, 152 miles of fencing and 2.5 million square feet of riparian planting have helped produce lower fecal counts and have stabilized streambanks.

*Today more people live at Lake Chelan year-round than ten years ago. Photo courtesy of Lake Chelan Chamber of Commerce and Visitor Center.*

The Lake Chelan TMDL is a good example of how the process can help prevent degradation of the high quality of water, and of how a locally-driven initiative can use federal law to attain a community goal of clean water.

**Problem:** In 1989, Ecology completed a phosphorus TMDL of Lake Chelan. The study had three main purposes:

1. To provide baseline water quality data;
2. To evaluate on-site septic disposal systems within the developing watershed; and
3. To estimate the potential sources of, and harm from, nutrients, bacteria, and other chemicals.

The assessment found that phosphorus was promoting algae growth in Lake Chelan. Between 75 and 90 percent of the phosphorus came from natural sources. Of the remaining, 10 to 25 percent came from septic systems and agriculture (primarily orchards). Chinook salmon net pens contributed less than a tenth of a percent.

**Project Description:** Lake Chelan, a pristine lake in north central Washington, is more than 50 miles long, with an average width of one mile and a maximum depth of 1,486 feet. Its volume is so great, it takes almost 11 years for all the water in the lake to be replaced. The watershed covers 924 square miles, mostly in national forest and park lands. It is an important destination for recreation and tourism, which are keys to the local economy. The southern shore is experiencing rapid growth of new year-round residents.

In 1990, several local groups formed the Lake Chelan Water Quality Committee, which prepared the Lake Chelan Water Quality Plan. As part of the TMDL, the plan specifies steps to ensure the lake maintains its pristine condition. The plan's first recommendation was to expand existing sewer facilities and extend services to new areas.

**Project Results:** Total phosphorus loading capacity was set at 112 pounds per day, allocated among the existing sources. Using water quality modeling based on the expected growth in the watershed, this allows for a maximum increase of 1.1 pounds (about 1 percent) of phosphorus per day to the entire lake. The plan limits the net pens to their existing level of phosphorus input.

Waste water treatment facilities have been expanded. Sewer lines have been extended to unsewered areas. Stormwater and on-site septic system ordinances have been revised and updated. Agricultural drain monitoring has been conducted and continues today. Education to growers is being conducted regarding farm plans and BMPs. Boat waste disposal facilities have been improved. The Lake Chelan Water Quality Committee is also currently working with Ecology regarding a DDT/PCB TMDL for Lake Chelan. The Lake Chelan Water Quality Committee continues in its role as lead entity for water quality issues on Lake Chelan.

# Success Story: Sediments and Pesticides in the Lower Yakima River

*Sulphur Creek, a tributary of the Yakima River, receives runoff from about 41,500 acres of farm land. It used to look like this, carrying an average of 110 tons of sediment per day during the irrigation season. 1998*

This project empowered irrigators to protect surface water quality by improving irrigation delivery and application systems.

**Problem:** For years, the Yakima River carried muddy sediments tainted with DDT, poisoning aquatic life and smothering fish spawning grounds. A TMDL plan written in 1998 called for over 90 percent reductions in sediment during the first ten years of implementation and attainment of the DDT human health criteria in fish and water by 2017.

**Project Description:** Studies identified erosive furrow and flood irrigation practices as the main reason for sediment and DDT loading in the Yakima River. Local conservation districts began a massive education program to enlist, and provide incentives for, farmers to install more efficient irrigation systems, including sprinkler and drip. Site-specific solutions were designed with the individual landowners.

Alternatively, some farmers employ a coagulating agent known as polyacrylamide (PAM), resulting in better soil saturation and less runoff in the fields. These management practices were new to the area. Additionally, the Sunnyside and Roza Irrigation Districts adopted a water quality policy, started a water quality monitoring program, hosted a water quality expert from Ecology in their offices, and provided low interest loans for growers to improve their irrigation application systems.

*After the installation of BMPs, sub-basins reported decreases in suspended sediment of as much as 86 percent. Sulphur Creek 2000*

**Project Results:** Sediment collection basins, water re-use systems, surge irrigation, soil moisture monitoring, precision irrigation scheduling, buffers along fields and canals, stabilization of canal banks, and improved management of water delivery systems also contributed to clearer water. Although the timeline of the TMDL runs through 2017, improvements are already significant. Samples collected at about 15 sites from June 1997 through October 1999 showed a decrease in total suspended solids of 86 percent in one sub-basin, while another sub-basin showed a decrease of 56 percent.

The conservation districts and major irrigation districts conducted baseline and follow-up monitoring to measure the effects of the farmers' actions. Ecology and the Yakama Nation are now conducting effectiveness monitoring on the river's main stem and in the major tributaries.

**Working Together To Achieve Clean Water:**
**A Progress Report**

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